

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

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CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Senna armata* (S. Watson) H.S. Irwin & Barneby

COMMON NAME: Desert cassia, desertsenna, desert senna, spiny senna

SYNONYMS: *Cassia armata* S. Watson

FAMILY: Fabaceae

AUTHOR, PLACE OF PUBLICATION: *Senna armata* (S. Watson) H.S. Irwin & Barneby, Mem. New York Bot. Gard. 35: 292. 1982. *Cassia armata* S. Watson, Proc. Amer. Acad. Arts and Sci. 11: 136. 1876.

TYPE LOCALITY: Western Arizona, USA.

TYPE SPECIMEN: Lectotype: GH-53008. G.M. Wheeler s.n., 1871, *in* D. Isely, Mem. New York Bot. Gard. 25: 197. 1975.

TAXONOMIC UNIQUENESS: Species *armata* is 1 of 46 species in the genus *Senna*, and 1 of 6 in Arizona.

DESCRIPTION: A heavily branched, rounded, glabrous, gray-green low shrub, 1-3(-5) feet (0.3-0.91[-1.53] m) tall. Stems clustered, more or less erect, green and photosynthetic, branches often ending in spines (weak). Leaves are alternate, pinnately compound, 5-15 cm (2-6 in) and drought-deciduous (leafless most of the year). Leaflets are in 2 to 4 pairs, tiny, roundish but asymmetrical; the leaf axis is sharp-pointed and remains on the stem as a weak spine after the leaflets fall off. The flowers are only slightly bilaterally symmetrical, 0.5 to 1 inch across, borne in elongate racemes at the stem tips. The 5 sepals are not fused, while the 5 petals are golden yellow to reddish tinged, strongly veined, and narrows at the base, thus appearing stalked. The stamens number 10, with the 3 upper ones being sterile, and the anthers of the 7 fertile ones are arched upward toward the style. The fruit is a straight, cylindrical, few-seeded, dehiscent pod, 1.0-1.5 in. (Taylor 1998; Spellenberg 2003).

AIDS TO IDENTIFICATION: For most of the year, when not in bloom, shrubs are an inconspicuous, tangled mass of grayish living and dead twigs (Spellenberg 2003).

ILLUSTRATIONS: Color photos (Taylor, 1998).
B&W drawing (Benson and Darrow 1981)
B&W drawing (Jaeger 1969)

Color photos of plant and flowers (SDSU, accessed 2002, <http://www.serg.sdsu.edu/SERG/specieslists/mojavespecies/Sa.html>).
Color photos of plant and flowers (several photographers, 1992-2004, *In* CalPhotos, http://elib.cs.berkeley.edu/cgi/img_query).
Color photos (*in* http://plants.usda.gov/cgi_bin/plant_search.cgi)
Color of plant, flowers, and seedpods (*in* <http://www.calflora.net/bloomingplants/desertsenna.html>)
Color photo (Spellenberg 2003: p. 186)

TOTAL RANGE: Western Arizona, southern Nevada, and southeastern California, and Baja California, Mexico.

RANGE WITHIN ARIZONA: Near Boulder Dam, Hoover Dam, Willow Beach, and Yucca in Mohave County.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial low growing shrub

PHENOLOGY: Flowers April to May. Spellenberg (2003), reports blooming period from February-May, and sometimes again from October-November.

BIOLOGY: *Senna* is a large genus of primarily unarmed tropical trees and shrubs with large evergreen leaves. In the species *armata*, which is armed with spines, the leaflets are deciduous, falling at the onset of drought, and the stems have assumed the major responsibility of photosynthesis. This greatly reduces water loss through transpiration. Also, young branches are covered with scalelike hairs that further reduce water loss. (Taylor 1998).

HABITAT: Common in sandy washes, gravelly flats and open places in creosote bush scrub below 3,700 ft (1128 m) elevation. In California, found in Desert Mountains, Mohave Desert, and Sonoran Desert.

ELEVATION: 500-3,350 ft. (152-1021 m). In California, elevations range from 656-3,281 feet (200-1000 m). Spellenberg (2003) reports elevation from 600-3,500 feet (183-1068 m).

EXPOSURE: All

SUBSTRATE: Sand and gravelly washes.

PLANT COMMUNITY: Colorado and Mohave desertscrub. In California, this plant has been found in Creosote Bush Scrub associated with: *Acacia*, *Acamptopappus sphaerocephalus* (Rayless Goldenhead), *Ambrosia* (Bursage), *Atrichoseris platyphylla* (Tobacco-weed), *Baileya*

(Desert-marigold), *Bebbia juncea* (Sweetbush), *Encelia* (Brittlebush), *Ephedra* (Mormon-tea), *Eriogonum* (buckwheat), *Hymenoclea* (Burrow-brush), *Larrea tridentata* (Creosotebush), *Opuntia echinocarpa* (Straw-top cholla), *O. ramosissima* (Lead-pencil cholla), *Psoralea* *fremontii* var. *fremontii* (Fremont false dalea), *Tetradlea fasciculatus* (Chuckwalla shrubby-spurge), *Yucca brevifolia* (Joshua Tree), and *Y. schottii* (Mojave Yucca). (From collections in SEINet, accessed 2005).

POPULATION HISTORY AND TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: None (USDI, BLM AZ 2005)
[Bureau of Land Management Sensitive (USDI, BLM 2000)]

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP:

SOURCES OF FURTHER INFORMATION

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MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION:

The genus name *Senna* is from the Arabic name *Sana*. The species name *armata* or *armatum*, means spiny or thorny, literally “armed.”

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